

**ABSTRACT OF THE DISCLOSURE**

A numerical control oscillator (NCO) for reducing a circuit size and power consumption while maintaining a desired frequency deviation, and suppressing generation of a spurious as much as possible. The NCO comprises a phase accumulator for accumulating input phase difference data to generate phase data, and a read only memory (ROM) for storing a phase/amplitude conversion table to output amplitude data corresponding to the phase data generated by the phase accumulator. The phase accumulator includes a phase register and a phase calculator. If a sampling frequency of an output signal from the NCO is  $F_s$ , the upper limit of a desired frequency setting interval of the output signal is  $FD$  and  $K$  and  $L$  are arbitrary integers, the phase calculator adds or subtracts the input phase difference data and phase data from the phase register to or from each other by a modulo operation taking the nearest integer of  $M$  as a modulus, where  $M = F_s/FD \times K/L$ . The ROM has its address terminal connected to an output terminal of the phase accumulator. On the basis of the stored phase/amplitude conversion table, the ROM outputs amplitude data corresponding to phase data, input from the phase accumulator to the address terminal, through its data terminal as an output signal of the NCO set to a frequency setting interval of a  $dF$  step, where  $dF = FD/K \times L$ .